ELSEVIER

Volume 313, Numbers 1–2, 15 December 2000

Journal of ALLOYS AND COMPOUNDS

www.elsevier.com/locate/jallcom

Contents

Letters

The layered structure of La substituted $SrMnO_3$ L1
T. Mori and N. Kamegashira (Toyohashi, Japan)

Crystal structure of ternary CeRhX compounds, X=As, Sb, Bi L5
P. Salamakha (Higashi-Hiroshima and Ibaraki, Japan), O. Sologub, T. Suemitsu and T. Takabatake (Higashi-Hiroshima, Japan)

Neodymium trihydride, NdH_3, with tysonite type structure L10
G. Renaudin (Geneva, Switzerland), P. Fischer (Villigen, Switzerland) and K. Yvon (Geneva, Switzerland and Qld., Australia)

On the synthesis of the new intermetallic phase $Nd_2(Fe,W)_{29}$ L15
J.L. Sánchez Ll., A.D. Santana Gil (La Habana, Cuba), J. Matutes Aquino and C. Torres-Garibay (Chihuahua, Mexico)

The La–Y–Ag system: isothermal section at 700°C and hardness of the intermetallic phases L19
O.O. Shcherban, N.Z. Vityk, R.E. Gladyshevskii (L'viv, Ukraine) and R. Flükiger (Genève, Switzerland)

Physics

Large thermoelectric power in several metallic compounds of cerium and uranium 1
Y. Bando (Kure, Japan), T. Suemitsu, K. Takagi, H. Tokushima, Y. Echizen, K. Katoh, K. Umeo, Y. Maeda and T. Takabatake (Higashi-Hiroshima, Japan)

Magnetic and structural properties of $Ce_2Fe_{17-x}Mn_x$ compounds 7
A.G. Kuchin, A.N. Pirogov, V.I. Khrabrov, A.E. Teplykh, A.S. Ermolenko and E.V. Belozerov (Ekaterinburg, Russia)

^{197}Au and ^{57}Fe Mössbauer study of Au-substituted Al–Cu–Fe quasi-crystalline alloys 13
A. Kyek, F.E. Wagner (Garching, Germany), P. Palade, A. Jianu, D. Macovei, R. Popescu, R. Manaila and G. Filoti (Bucharest-Magurele, Romania)

Magnetic properties of $TbFe_4Al_8$ 21
N.P. Duong, I.H. Hagmusa, E. Brück, F.R. de Boer and K.H.J. Buschow (Amsterdam, The Netherlands)

Magnetic study of $HfFe_6Ge_6$-type solid solutions $TbMn_6Ge_{6-x}Ga_x$ ($0.05 \le x \le 0.60$) and $TmMn_6Ge_{6-x}Ga_x$ ($0.2 \le x \le 1.0$) 26
G. Venturini (Vandoeuvre les Nancy, France)

Hydrogen occupancy, ^{1}H NMR spectrum and second moment of Zr_2Ni_{1-x}–H metallic glasses 34
G. Lasanda, P. Bánki and K. Tompa (Budapest, Hungary)

Chemistry

Crystal structure of RNiPb (R=Y, Nd, Sm, Gd, Tb, Dy, Ho, Er, Tm, Lu) compounds 42
L.D. Gulay (Wrolcaw, Poland), Ya.M. Kalychak (L'viv, Ukraine), M. Wolcyrz and K. Lukaszewicz (Wrolcaw, Poland)

Gas atomization of metal hydrides for Ni–MH battery applications 47
M.L. Anderson and I.E. Anderson (Ames, IA, USA)

Hydriding characteristics of zirconium-substituted FeTi 53
N. Nishimiya, T. Wada, A. Matsumoto and K. Tsutsumi (Toyohashi, Japan)

Crystal structure and Charge Distribution of $ErFeMnO_4$ 59
M. Nespolo, M. Isobe (Ibaraki, Japan), J. Iida (Chiba, Japan) and N. Kimizuka (Sonora, Mexico)

Crystal structure of $K_4Pu(SO_4)_4 \cdot 2H_2O$ 65
K.D. Singh Mudher and K. Krishnan (Mumbai, India)

Solid state phase transformations in $LiAlH_4$ during high-energy ball-milling 69
V.P. Balema, V.K. Pecharsky and K.W. Dennis (Ames, IA, USA)

Elsevier Science B.V.

Metallurgy

Refinement of the crystal structure of Ge_3Nd_5 . . . 75
L. Zeng (Guangxi, PR China) and H.F. Franzen (Ames, IA, USA)

Standard enthalpies of formation of some Th alloys with Group VIII elements (Co, Ni, Ru, Rh, Pd, Ir and Pt), determined by high-temperature direct synthesis calorimetry . . . 77
J. Wang (Chicago, IL, USA and Guangzhou, PR China), Q. Guo (Chicago, IL, USA and Guiyang, PR China) and O.J. Kleppa (Chicago, IL, USA)

The phase diagrams of the quasibinary systems (Pb,Ge)Te and (Ge,Sn)Te . . . 85
L. Yashina (Moscow, Russia) and V. Leute (Münster, Germany)

Isothermal section of the phase diagram of the ternary system Dy–Ni–Ti at 773 K . . . 93
L. Jingqi, P. Shunkang and Z. Yinghong (Guangxi, PR China)

The preparation of high hydrogen content yttrium silicide carbides with reversible storage potential . . . 95
M.A. Hassen and I.J. McColm (Bradford, UK)

X-ray characterization of the microstructure of α-CuTi alloys by Rietveld's method . . . 104
A. Chanda and M. De (Calcutta, India)

Thermodynamic evaluation of the Mo–Ru system . . . 115
C.-S. Oh, H. Murakami and H. Harada (Ibaraki, Japan)

Formation of superabundant vacancies in Pd–H alloys . . . 121
Y. Fukai (Tokyo, Japan), Y. Ishii (Saitama, Japan), Y. Goto (Tokyo, Japan) and K. Watanabe (Saitama, Japan)

CVM calculation of the ternary system Co–Cu–Fe . . . 133
S. Bein, C. Colinet and M. Durand-Charre (St. Martin d'Hères, France)

Investigation of phase diagram of the Y–Cu–Pb system at 870 K . . . 144
L.D. Gulay (Wroclaw, Poland)

Standard enthalpies of formation of $ThAl_2$, $ThSi_2$, $ThGe_2$ and Th_5Sn_3, determined by high-temperature direct synthesis calorimetry . . . 148
J. Wang (Chicago, IL, USA and Guangzhou, People's Republic of China), Q. Guo (Chicago, IL, USA and Guiyang, People's Republic of China) and O.J. Kleppa (Chicago, IL, USA)

Microstructure characterization of phase transformations in a Zn–22 wt%Al–2 wt%Cu alloy by XRD, SEM, TEM and FIM . . . 154
H.J. Dorantes-Rosales, V.M. López-Hirata, J.L. Méndez-Velázquez, M.L. Saucedo-Muñoz and D. Hernández-Silva (México, Mexico)

Materials Science

Influence of temperature and of structure of antimony substrate on gallium diffusion into the GaSb semiconductor compound . . . 161
V.M. Kozlov and L. Peraldo Bicelli (Milano, Italy)

Magnetic property changes during embrittlement of a duplex stainless steel . . . 168
S.S.M. Tavares (Niteroi, Brazil), M.R. da Silva (Itajubá, Brazil) and J.M. Neto (Rio de Janeiro, Brazil)

Techniques for metal hydride thermal energy conversion and their optimization . . . 174
G.A. Fateev, K.-J. Jang, J.-G. Park, S.-C. Han, P. Lee and J.-Y. Lee (Taejon, South Korea)

On the kinetics of the α–σ phase transformation in an Al-doped Fe–Cr alloy . . . 182
A. Blachowski, S.M. Dubiel, J. Zukrowski, J. Cieślak (Kraków, Poland) and B. Sepiol (Wien, Austria)

Foaming characteristics control during production of aluminum alloy foam . . . 188
C.C. Yang (Hsingchu, Taiwan) and H. Nakae (Tokyo, Japan)

Surface analysis of polycrystalline and nanocrystalline $LaNi_5$-type alloys . . . 192
L. Smardz, K. Smardz, M. Jurczyk and J. Jakubowicz (Poznan, Poland)

High temperature mechanical properties of a submicrocrystalline Ti–47Al–3Cr alloy produced by mechanical alloying and hot isostatic pressing . . . 201
M.R. Shagiev (Ufa, Russia), O.N. Senkov (Moscow, ID, USA), G.A. Salishchev (Ufa, Russia) and F.H. Froes (Moscow, ID, USA)

Direct hydrogenation of Mg and decomposition behavior of the hydride formed . . . 209
P. Wang, H.F. Zhang, B.Z. Ding and Z.Q. Hu (Shenyang, China)

Effect of thermal treatment on the atomic ordering of mechanically alloyed Al_3Nb 214
K.-M. Lee, J.-S. Lee, D.-J. Lee (Kwangju, South Korea), S.-S. Kim, I.-S. Ahn (Chinju, South Korea) and M.-W. Park (Pusan, South Korea)

Hydrogenation characteristics of Mg–TiO_2 (rutile) composite 218
P. Wang, A.M. Wang, H.F. Zhang, B.Z. Ding and Z.Q. Hu (Shenyang, China)

Mechanically induced gas–solid reaction for the synthesis of nanocrystalline ZrN powders and their subsequent consolidations 224
M.S. El-Eskandarany and A.H. Ashour (Cairo, Egypt)

Estimation of bulk moduli of compounds by empirical relations between bulk modulus and interatomic distance 235
Y. Makino and S. Miyake (Osaka, Japan)

A molecular dynamics study on plutonium mononitride 242
K. Kurosaki, K. Yano, K. Yamada, M. Uno and S. Yamanaka (Osaka, Japan)

Mechanical characterization in PSZ/NiCrAlY composites fabricated by plasma activated sintering 248
J.-H. Shin, S.-K. Hur, C.-G. Ha, Y.-G. Jung (Kyungnam, South Korea) and U. Paik (Seoul, South Korea)

The surface state of nanocrystalline and amorphous Mg_2Ni alloys prepared by mechanical alloying 258
H.Y. Lee, N.H. Goo, W.T. Jeong and K.S. Lee (Seoul, South Korea)

Electrochemical hydrogenation behavior of C15-type $Zr(Mn,Ni)_2$ alloy electrodes 263
Y.-S. Hsu, S.-L. Chiou and T.-P. Perng (Hsinchu, Taiwan, ROC)

The hydrogen desorption kinetics of Pd-coated $LaNi_5$-type films 269
F. Cuevas and M. Hirscher (Stuttgart, Germany)

Author Index of Volume 313 277

Subject Index of Volume 313 279

Keyword list